FINDING OF NO SIGNIFICANT IMPACT

CONSTRUCTION OF WEAPONS TRAINING FACILITY FOR THE U.S. BORDER PATROL TACTICAL UNIT MEYER RANGE, FT. BLISS, TEXAS

I have reviewed the attached Environmental Assessment (EA) prepared by the U.S. Army Corps of Engineers (Corps), Fort Worth District for the Joint Task Force Six (JTF-6) project for the U.S. Border Patrol. JTF-6 coordinates all Title 10 Department of Defense support to federal, state, and local law enforcement agencies as requested by Operation Alliance and approved by the Joint Chiefs of Staff in the efforts to disrupt illegal drug operations along the southwest land border and protect national security.

The purpose of weapons training facility construction is to facilitate the U.S. Border Patrol, specifically Border Patrol Tactical Unit (BORTAC) in maintaining weapons proficiency. In addition, this operation will provide deployment and sustainment engineering training for the HSC 864th Engineer Combat Battalion (Heavy), Fort Lewis, Washington. The proposed training facility will be constructed at Range 8, Meyer Range Complex, Ft. Bliss, Texas. Range 8 was previously used as a firing range and will require only minor modifications. This project will be completed by troops using heavy earth-moving equipment and will take approximately six weeks. Troops will bivouac at Meyer Range Complex.

Alternatives considered include no action, alternative sites, and the proposed plan described above. The no action alternative would not facilitate maintaining weapons proficiency by BORTAC and alternative sites were found to have possible safety hazards.

There will be no adverse affects to the natural environment associated with the proposed project. No impacts will occur to any species listed or proposed for listing as threatened or endangered in accordance with the Endangered Species Act.

An Environmental Assessment has been prepared by the U.S. Army Corps of Engineers, Fort Worth District, for the proposed action and its alternative. The proposed work site is upland and will not involve the need for evaluation under Section 404(b)(1) of the Clean Water Act.

Based upon the results of this Environmental Assessment and the results of coordination, it has been concluded that the proposed action will not have a significant adverse effect on the human environment.

I have considered the available information contained in this EA, and it is my determination that the proposed project will not result in any significant adverse effect on the existing environment. All requirements of the National Environmental Policy Act (NEPA) have been satisfied; therefore, preparation of an Environmental Impact Statement (EIS) is not required. A final Programmatic Environmental Impact Statement (PEIS) was completed on November 30, 1994, describing cumulative environmental impacts.

3 MAY 95
Date

KEVIN P. BYRNES
Brigadier General, U.S. Army
Commanding

FINAL

CONSTRUCTION OF WEAPONS TRAINING FACILITY FOR THE U.S. BORDER PATROL TACTICAL UNIT (BORTAC)

Prepared by:
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Ft. Worth District
819 Taylor Street
Ft. Worth, Texas 76102

APRIL 1995

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1.0 INTRODUCTION

This Environmental Assessment (EA) addresses potential impacts associated with the proposed construction of a weapons training facility at Meyer Range Complex, McGregor Range, Fort Bliss, Texas. This EA was prepared by Geo-Marine, Inc., under Contract Number DACA63-93-D-0014, Delivery Order Number 0107, for the U.S. Army Corps of Engineers (USCOE), Fort Worth District in accordance with the National and Historical Preservation Act of 1966, as amended; the Archeological and Historical Preservation Act of 1974, as amended; the National Environmental Policy Act of 1969 (NEPA); Army Regulation (AR) 200-2; Endangered Species Act of 1973, as amended; Executive Order (E.O.) #11593, "Protection and Enhancement of the Cultural Environment"; E.O. 11988; and E.O. 11990.

There are two appendices to this report. Appendix A presents all written correspondence to date concerning the EA. Appendix B is a list of all protected species potentially occurring on the site of the proposed training facility.

1.1 Background

The Immigration and Naturalization Service (INS), of the U.S. Department of Justice, was originally created in 1890 as the Bureau of Immigration with the responsibility to regulate and control immigration into the United States. The U.S. Congress created the Border Patrol in 1924 to be the law enforcement branch of the INS. Within the frame work of the U.S. Border Patrol, the Border Patrol Tactical Unit (BORTAC) is a multipurpose force which can address a variety of missions. BORTAC's mission includes planning and conducting unconventional operations; providing a pool of resources from which training assistance and operational teams can be drawn; establishing and standardizing training and operational policies for Emergency Response Teams and other BORTAC staff; testing, evaluating, procuring, and distributing equipment for use in special operations; and acting as the military training coordinator for the special operations concept.

The U.S. is experiencing high levels of drug use and increasing amounts of drug-related crime. Negative impacts of widespread drug use on society continue to affect the work force, educational system, general law and order, and traditional family values and structure. Rising rates of violent crime, serious damage to the Nation's health and economy, and strains on vital relationships with international allies led the U.S. Congress to develop the National Drug Control Strategy (NDCS). The NDCS included Department of Defense (DoD) involvement, and in 1989, the Secretary of Defense defined a significant role in the

counterdrug effort for Joint Task Force Six (JTF-6). The Secretary directed that key commanders within various Armed Services develop plans identifying proposed methods of providing assistance in reducing the flow of drugs into the United States.

JTF-6 was established in November 1989 and was assigned an area of operations to include the four southwestern states of Texas, New Mexico, Arizona, and California. The most recent NDCS indicated that the "high intensity drug trafficking areas" (HIDTAs) for the United States were Houston, Texas; Los Angeles, California; New York City, New York; Miami, Florida; and the southwestern border region. Three of these five HIDTAs (Houston, Los Angeles, and southwest U.S.) fall within the jurisdictional area assigned to JTF-6.

1.2 Purpose and Need

This project is to develop Range 8, Meyer Range Complex, McGregor Range into a tactical firearms training range to assist the U.S. Border Patrol, specifically BORTAC, in maintaining weapons proficiency. A secondary objective of this project, but extremely important goal for DoD, is to provide training opportunities for Active and Reserve units in deployment and redeployment, logistics and design planning, and construction.

Weapons training ranges are used by Law Enforcement Agency (LEA) officers to maintain firearm proficiency. Most LEAs require officers to qualify with weapons that are used during law enforcement activities; BORTAC requires agents to qualify on a quarterly basis with mission specific weapons. JTF-6 units have previously participated in weapons training range construction/upgrading, usually installing earthen berms around existing ranges. Small caliber bullets from semi-automatic rifles, shotguns, and pistols are used at these firing ranges. These firing ranges may be utilized daily by several agencies.

Currently, BORTAC utilizes a firing range at a local Rod and Gun Club for training and maintaining weapons proficiency. However, use of this range requires a 30 day advance notice. BORTAC is a Emergency Response Team (ERT) and often times does not have the 30 days for advance notification. The proposed training facility would be primarily for BORTAC use and thus, a one day prior notification is all that would be required for range use. Therefore, construction of the training facility would enhance the ability of BORTAC to fulfill mission requirements.

2.0 PROPOSED ACTION AND ALTERNATIVES

This section of the EA discusses alternatives that were considered during preparation of this document. Several alternatives were eliminated from further consideration due to technical and/or economic factors. This EA addresses proposed weapons training facility construction which, upon completion, will increase effectiveness of the U.S. Border Patrol in the current battle against drug trafficking and smuggling activities by enabling BORTAC and other LEA's to maintain weapons proficiency. Including the no action alternative, three alternatives were considered in this EA. The proposed action and each alternative is discussed in the following paragraphs.

2.1 Description of Proposed Action

Range 8, Meyer Range Complex, Ft. Bliss, Texas (Figures 2-1 and 2-2) is located within McGregor Range at Ft. Bliss. McGregor Range is an active training facility used by the U.S. Army for ground maneuvers, missile firings, manned aircraft and helicopter activity, and drone aircraft and target missions. The Meyer Range Small Arms Complex is a series of firing ranges used for weapons training. Many of these firing ranges have been cleared; the ranges that are not cleared are subject to lighter or varied use to reduce impacts to vegetation. In general, the entire Range Complex has been disturbed to some degree. Range 8 was previously used as a firing range but use was discontinued around 1990.

BORTAC proposed to develop half of Range 8 from its current conditions to a fully developed, multi-purpose range facility to facilitate tactical firearms training. Primary range berms will be extended 200 meters, to allow for a 500-meter berm separating Range 8 and adjacent ranges. Other berms will be placed as necessary to divide the facility into three separate range areas, each 100 meters wide (designated 8A, 8B, and 8C). Range 8A will be designated for precision shooting and will have firing points placed on berms at 100, 200, and 400 meter points.

Range 8B (center range) will be divided into a "jungle lane" training area (downrange), and a 100-yard marksmanship range (uprange). The marksmanship range will be cleared to allow for a 100-yard open range area. Existing brush will be allowed to return to the "jungle lane" area on which students may learn to negotiate desert terrain and engage targets placed within the range safety fan.

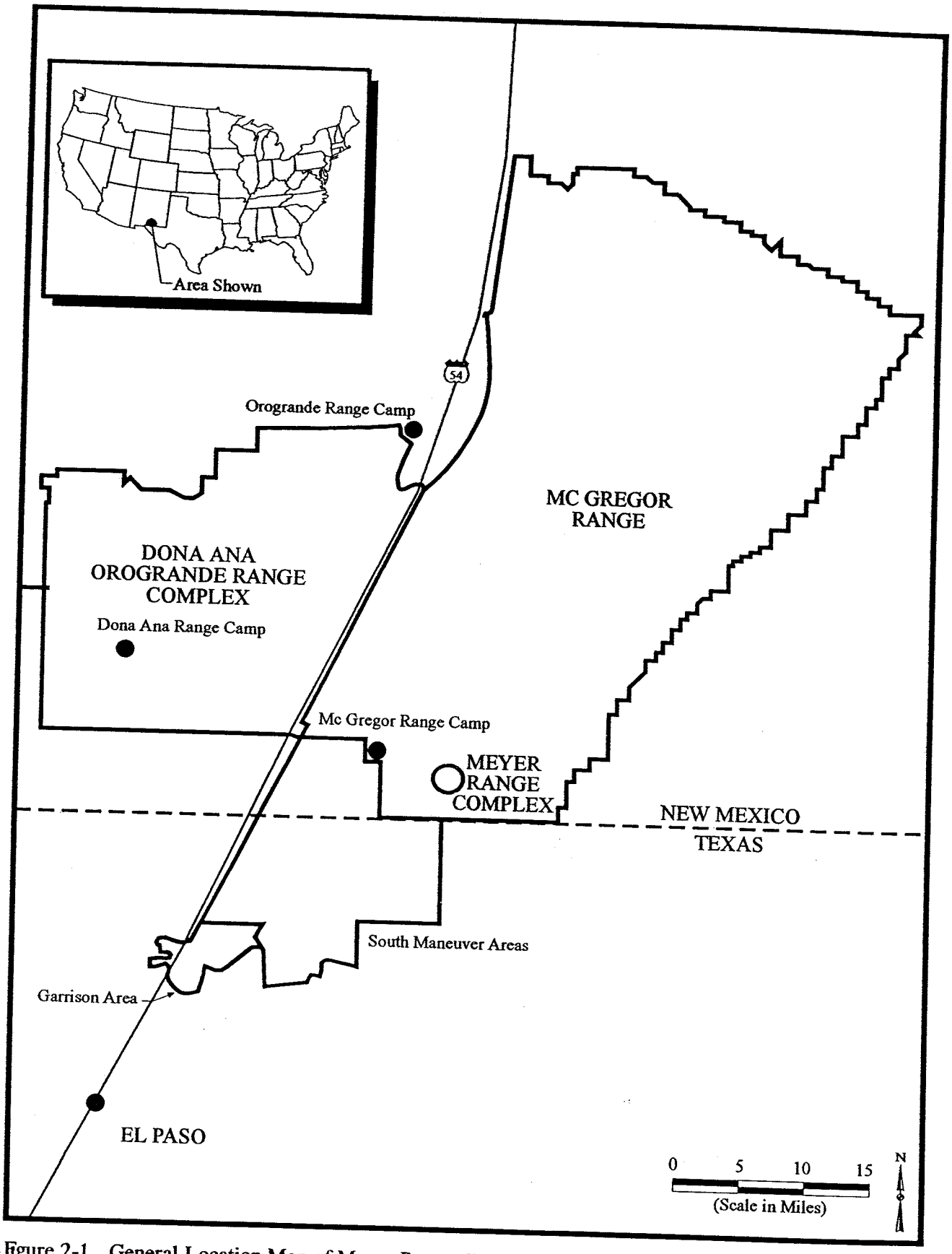

Figure 2-1. General Location Map of Meyer Range Complex, McGregor Range, Ft. Bliss, Texas.

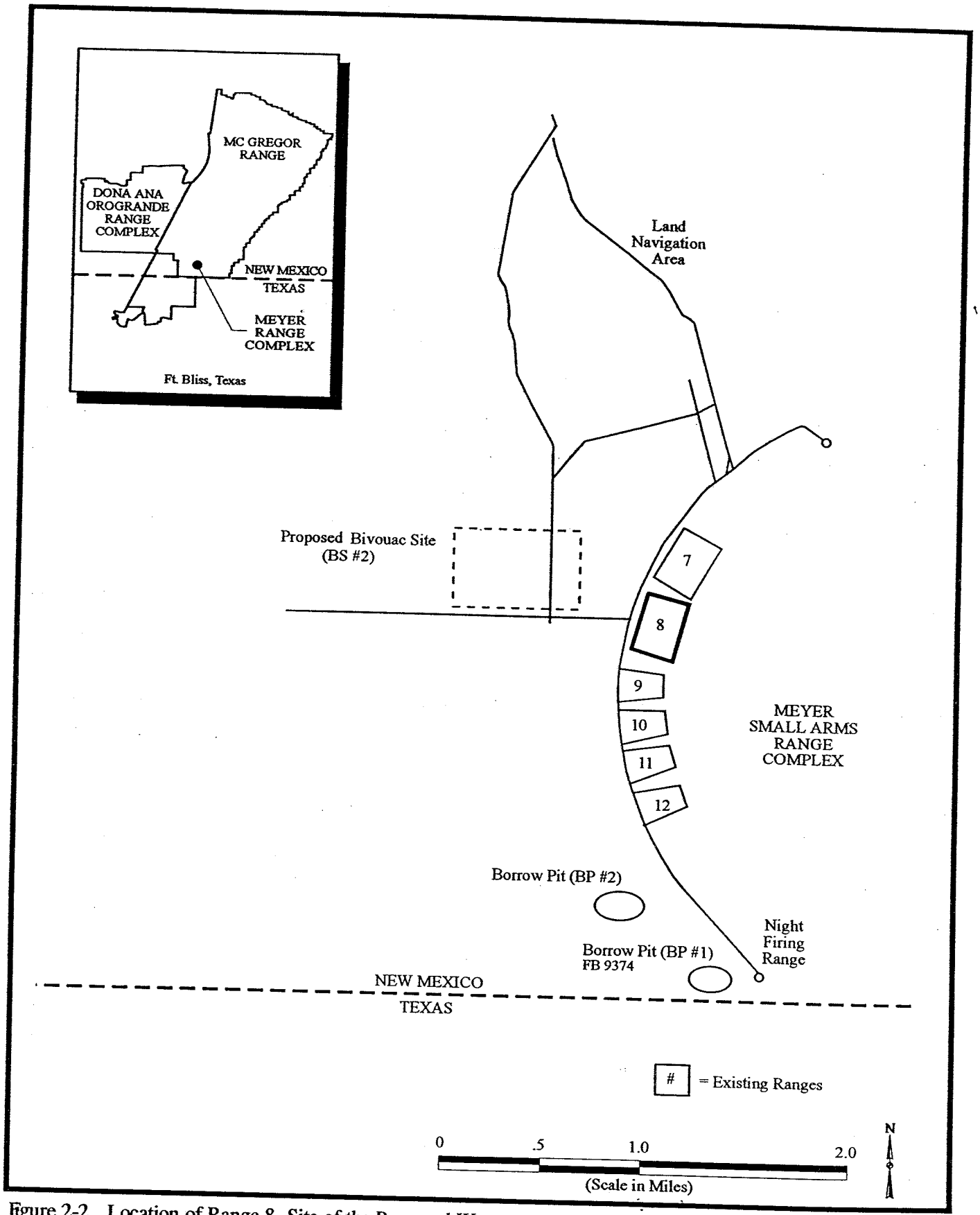

Figure 2-2. Location of Range 8, Site of the Proposed Weapons Training Facility, Meyer Range Complex, Ft. Bliss, Texas.

Range 8C will be cleared for International Practical Shooting Competition (IPSC) style shooting, fire, and maneuver tactics and general tactical firearms training scenarios. The downrange portion of 8C will be divided by a lateral berm to allow for the eventual placement of a Close Quarter Battle (CQB) training area separate from the IPSC training area. A storage container will be moved to the range facility to house targets, frames, steel knock-down target equipment, and other temporary firearms training apparatus.

Weapons training facility construction will involve deployment of the HCS 864th Engineer Combat B (Heavy). Completion of the project will take approximately six weeks. The unit will utilize one grader, two endloaders, one pneumatic roller, one vibratory roller, six scrapers, four low bed trailers, one water distributer, five rip/rop dozers, two dozer with winches, one shop equipment trailer, two bomags, two 1.5 ton trailers, one tank and pump, one bolster trailer, one fork lift, four 6X6 tractor trucks, two Humvees, and three 5-ton trucks with winches. Soldiers will stay at a bivouac site on Ft. Bliss. Concurrent with this project, the unit will be constructing a fence along the New Mexico-Mexico border to support the mission of the U.S. Border Patrol. Fence construction is being addressed in a separate EA.

2.2 Alternative Eliminated From Further Consideration

Construct Range at Different Locations

Construction of this range at alternate locations was initially considered a viable alternative. Ranges 7, 19, and 20 were surveyed prior to elimination from consideration. However, these ranges were found to have safety hazards associated with range firing fans. These safety hazards would have been very high during construction as well as during range use. The safety factor alone was significant enough to eliminate these ranges from further consideration. However, vegetation on Ranges 19 and 20 appeared to be less disturbed than vegetation on other ranges and a significant cultural resources site is located on Range 19. By constructing the proposed weapons training facility on Range 8, impacts to the cultural resources site and vegetation found throughout Ranges 19 and 20 were subsequently avoided.

2.3 Alternatives Still Considered to be Viable

No Action

Although no significant adverse impacts would occur if implemented, the No Action alternative would not satisfy the purpose and need of the BORTAC or other LEAs uses for the training facility. Implementation of the No Action alternative would not increase BORTAC's effectiveness and would decrease availability of adequate facilities for LEA officers to maintain weapons proficiency.

Construct Range at Proposed Location

Construction of the training facility at the proposed locations also a viable alternative. As part of this alternative, certain factors may have to be considered to allow long term use of the range and to allow maximum benefits to be gained from range construction. Construction at the proposed location would increase the effectiveness of the BORTAC's law enforcement activities and facilitate BORTAC's agents, as well as other LEA officers, to maintain weapons proficiency.

2.4 Summary of Alternatives

The alternative of constructing the training facility at the proposed location (Range 8) is the preferred alternative. Constructing the range at this location would provide support to BORTAC and allow agents to maintain weapons proficiency. Constructing the range at alternative ranges was initially considered; however, safety hazards associated with those ranges precluded construction at those sites. The No Action alternative is considered a viable alternative in all NEPA documents, although this alternative is not recommended. Not constructing the training facility would set back BORTAC's ability to maintain weapons proficiency.

3.0 AFFECTED ENVIRONMENT

A Programmatic Environmental Impact Statement (PEIS) was recently completed to address cumulative effects of projects undertaken by JTF-6 (U.S. Army 1994). The PEIS provides details of JTF-6 activities that have occurred as well as information about the existing conditions within a 50-mile corridor along the US/Mexico border. Additional detailed information regarding the affected environment of this project area and other areas of proposed JTF-6 projects can be found in previously prepared Technical Support Documents (JTF-6 1993).

Considerable accumulations of eolian sands surround the hills just east of Range 8. This area is characterized by undulating dunelands dominated by mesquite overstory vegetation. Blading disturbance has cleared the majority of vegetation from Range 8 and prevailing winds are persistently moving sandy topsoils eastward. Topsoils from Range 8 is completely removed. Up to seven meters of elevational variation was observed in the unstabilized dunes adjacent to Range 8. Weathered gravels were present in deflated zones or blowouts among the dunes in this area, but a lack of caliche nodules suggest that wend erosion has not reduced soils beyond the potential limits of cultural contexts.

3.1 Climate

The project area has an overall arid, continental climate characterized by low relative humidity, hot summers, moderate winters, and wide variations in temperatures (USDA 1981). Soil water loss is highest during the dry season from winter to early summer. Dust and sand storms often occur during spring months. Thunderstorm activity is frequently intense during the mid-summer rainy season. Average annual rainfall ranges from eight to 11 inches. More than half of the annual precipitation falls during July-October. Annual precipitation is sufficient only to maintain desert vegetation. Average annual snow accumulation ranges from three to five inches, but there is rarely more than one inch of snow cover and it seldom remains for more than one day.

Mean annual temperature ranges from 58 to 62°F. The freeze-free period averages 235-248 days per year. November 12-15 are the average dates for the first killing frost and March 9-20 are the average dates for the last. An average of 10 days per year have temperatures above 100°F and temperatures below 10°F are rare.

3.2 Geology

The project area is within the Basin and Range geological/physiographic province. This province includes a large portion of western United States and is characterized by block-faulted ranges separated by broad intermontane basins. Actual modern river valleys are relatively narrow and cut into basin fill or older underlying rock. The region of the Rio Grande Drainage Basin occupied by Ft. Bliss has been characterized by gentle folding, broad regional uplifting, and inundations by continental seas. The current topography reflects Cenozoic structural deformation.

Broad regional uplift created fault patterns in the region resulting in a physiographic province characterized by down-dropped basins (grabens) bounded by tilted fault-block mountains. The Hueco Bolson and Tularosa Valley and paralleling mountain ranges are examples of grabens. These grabens have been filled with heterogeneous, unconsolidated to poorly-consolidated sediments which cover underlying Mesozoic and paleozoic sediments.

3.3 Soils

There are numerous soil types present throughout the 1.12 million acres of Ft. Bliss; however, only one major soil unit is present on the site of the proposed range facility. One characteristic of the soils in this region that can have major ramifications to both conservation and use is the extensive presence of caliche throughout the Hueco Bolson, and in isolated lenses in the Tularosa Basin. Known by other more descriptive names (i.e., hardpan, duricrust, and calcrete), caliche is generally a buff-white, extremely impermeable material.

The only major soil complex located at Range 8 is Pintura-Tome-Dona Ana. Pintura soils consist of deep, somewhat excessively drained soils that formed in coarse textured eolian material. These soils are generally loamy fine sands and range from noncalcareous to moderately calcareous and are mildly alkaline. Tome soils are very fine sandy loams that are deep, well-drained soils that formed in mixed alluvium. These soils are strongly calcareous and moderately alkaline. Dona Ana soils are fine sandy loams that are deep, well-drained soils that formed in medium and coarse textured eolian material and alluvium. These soils are also strongly calcareous and moderately alkaline. Overall, this complex consists of small to medium-sized areas of deep, somewhat excessively drained soils. The hazard of wind erosion is the most severe limitation for any type of construction that disturbs the surface (USDA 1981).

3.4 Air Quality

The State of New Mexico has adopted National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50) as the state's air quality criteria. However, New Mexico's standards for sulfur dioxide (SO_2), carbon monoxide (CO), and nitrogen dioxide (NO_2) are more strict than national standards, and New Mexico has adopted standards for total suspended particulates (TSP) and photochemical oxidants.

Primary standards are established to protect public health while secondary standards provide protection for the public's welfare including wildlife, climate, recreation, transportation, and economic values. Regulations in the Clean Air Act Prevention of Significant Deterioration (PSD) provisions (40 CFR Part 52 - PSD of Air Quality) were enacted in order to maintain or improve existing air quality in all Intrastate Air Quality Control Regions (AQCR) and National Rural and Wilderness Areas by creating various classifications using existing NAAQS pollutants. These classifications relate to the available increment above an established baseline concentration of a pollutant within which some increase will be allowed; Class I is most restrictive. The PSD provisions were designed to ensure that areas with air quality much better than the NAAQS would not be allowed to degrade to standard levels but would be allowed some limited degradation to accommodate development within an area.

Class I areas are areas where visibility is important as designated under the Clean Air Act Amendments (CAAA) of 1977 (40 CFR Part 81, Subpart D) by the Administrator of U.S. Environmental Protection Agency (USEPA), in consultation with the Secretary of the Interior. Emphasis in Federal and state air quality management and planning is placed on protecting these areas from air quality degradation.

Air quality data available for the Ft. Bliss area is concentrated near El Paso, Texas and does not always reflect the actual air quality of remote ranges many miles away. Therefore, since Meyer Range is considered remote, range land air quality at the project site may be more accurately compared to air quality at White Sands Missile Range (WSMR). WSMR is classified by EPA under the PSD program as a Class II area, which allows moderate development that may temporarily increase annual emission loading over the area. WSMR is in attainment of all air pollutants and ambient air quality standards established by the New Mexico Air Quality Control Board. Particulates, primarily from blowing dust, are the only air pollutants of significant concern in the WSMR area. WSMR generally has very low concentrations of air pollutants due to good atmospheric conditions and the absence of any continuous emissions. Meyer Range also lacks continuous emissions and therefore, also generally has low concentrations of air pollutants.

3.5 Water Resources

The New Mexico Water Quality Control Commission (WQCC) regulates water quality statewide and regularly collects water quality data from 18 U.S. Geological Survey sites each year. However, no monitoring stations are located on the proposed training facility site.

The groundwater supplies for the El Paso area, including McGregor Range, are derived from two basins separated by the Franklin Mountains. The Mesilla Bolson lies west of the Franklin Mountains, extending along the Rio Grande Valley into New Mexico and Mexico. The Hueco Bolson is the primary aquifer in Ft. Bliss. This aquifer extends south several miles into Mexico and northward into New Mexico. Almost all of the water supply for Ft. Bliss is provided by 39 deep wells within the Hueco Bolson.

3.6 Biological Resources

Vegetation

Vegetation density of the project area is low (five to 10 percent) due to previous disturbance. The limited vegetation that is present includes fluff grass (Tridens pulchellus), mariola (Parthenium incanum), peppergrass (Lepidium montanum), broom snakeweed (Gutierrezia sarothrae), and Russian thistle (Salsola kali tenuifolia). Additional species, such as mesquite (Prosopis gladulosa), sand sage (Artemisia filifolia), giant dropseed (Sporobolus giganteus), yucca (Yucca spp.), and fourwing saltbush (Atriplex canescens), occur outside of the range and on adjacent berms.

Reptiles

Reptiles are the most abundant and diverse group of vertebrate animals in the area surrounding the site of the proposed facility. Characteristic lizards include greater earless (Cophosaurus texanus), round-tail horned (Phrynosoma modestum), whiptails (Cnemidophorus spp.), and spiny (Sceloporus spp.). Common snakes of the area include whipsnakes (Masticophis taenatus), coachwhips (M. flagellum testaceus), ratsnakes (Elaphe spp.), and rattlesnakes (Crotalus atrox, C. molossus, and C. viridis). No reptiles were observed on the project area during a recent field survey (GMI 1995).

Birds

Bird fauna of the project area is typical of desert environments and associated habitats. Although deserts support diverse groups of birds, only scaled quail (Callipepla squamata) and white-necked ravens (Corvus monedula) are considered characteristic species and both commonly extend their range outside the desert

(Brown 1982). Common species include mourning dove (Zenaida macroura), ground dove (Columbina passerina), roadrunner (Geococcyx californianus), lesser nighthawk (Chordeiles acutipennis), pyrrhuloxia (Cardinalis sinuatus), cactus wren (Campylorhynchus brunneicapillus), crissal thrasher (Toxostoma crissale), black-throated sparrow (Amphispiza bilineata), horned lark (Eremophila alpestris), western meadowlark (Sturnella neglecta), turkey vulture (Cathartes aura), American kestrel (Falco sparverius), red-tailed hawk (Buteo jamasiensis), and northern harrier (Circus cyaneus). The spring migration of birds through southwestern U.S. occurs during March through May. No birds were observed at the proposed facility location during a recent survey (GMI 1995).

Mammals

Hall (1981) reported over 140 species of native mammals in New Mexico. At least five species have been introduced by man, including house mouse (Mus musculus), Norway rat (Rattus norvegicus), horse (Equus caballus), barbaray sheep (Ammotragus lervia), and gemsbok (Oryx gazella). Barbaray sheep and gemsbok were introduced by the New Mexico Department of Game and Fish in the late 1960's.

Non-game mammals, mostly small rodents, comprise a large basis of the food supply for carnivorous mammals and raptors. Common rodents include spotted ground and rock squirrels (Spermophilus spilosoma and S. variegatus), plains and desert pocket mice (Perognathus flavescens and P. penicillatus), kangaroo rats (Dipodomys spp.), and several other species of mice (Peromyscus spp.). Blacktail jackrabbits (Lepus californicus) are also commonly found near the project site. However, sparse vegetation and generally poor habitat of the project area support few mammals. During a recent field survey of the project area, no mammals were observed (GMI 1995).

Threatened, Endangered, and Protected Species

One of the specific objectives of this EA was to survey for any protected species occurring on or near the proposed facility site. Lists of protected species to be included in the survey were obtained through coordination with state and Federal agencies. Copies of the correspondence are included in this assessment as Appendix A. Species that were considered in previous studies near the proposed construction site were also included in surveys for this project. A listing of all protected species included in the survey in Appendix B. Field biologists surveyed for protected species by walking transects spaced at 10 m intervals throughout the range. Federally-listed species potentially occurring in the project area are described in the following paragraphs. Habitat requirements for these species are not met within the project area. Thus, no Federally-listed species were expected to be found within the project area.

Sneed's pincushion cactus (Coryphantha sneedii var. sneedii) is known to occur in Dona Ana County, New Mexico and El Paso County, Texas. It was Federally listed on 7 November 1979 as endangered in New Mexico and state listed (rare and very vulnerable to extirpation) in Texas. Its habitat is rocky slopes of limestone mountains at 4,000-6,000 feet mean sea level. It is considered endemic to the Franklin Mountains of Texas and New Mexico. Collection is the major threat to this species.

Northern Aplomado falcon (Falco femoralis septentionalis) is Federally listed as endangered and is rare in New Mexico. Falcon habitat consists of open coastal lowlands and grassland covered with tropical savannah. Shooting, human disturbance at nest sites, loss of nesting structures, brush encroachment, and pollution of food are significant threats to this species.

Bald eagles (Haliaeetus leucocephalus) are rare in the area with an occasional occurrence during winter migration. Eagles are listed by the U.S. Fish and Wildlife Service, the state of New Mexico, and the state of Texas as endangered. The bald eagle ranges throughout North America, usually near large waterbodies, but during migration will utilize mountain ridges. Shooting, human disturbance at nest sites, loss of nesting trees and associated waterside habitat, and pollution of food are significant threats to this species.

3.7 Bivouac Sites

Two bivouac sites will be utilized during construction of this range. One of the sites (BS #1) will primarily be used by soldiers constructing a fence for the U.S. Border Patrol along the U.S./Mexico border. However, this site will represent the headquarters of the unit during this mission. This site is located on, and was previously cleared by, Ft. Bliss. The majority of the site is barren ground. Vegetation surrounding the bivouac site is characteristic of a sand dune-mesquite vegetation zone (i.e., mesquite, creosote, fourwing saltbush, etc.). Vegetation density for the area surrounding this proposed bivouac site is approximately 45%, dominated by mesquite.

The other proposed bivouac site is located near Range 8 (BS #2, Figure 2-2). The majority of the site also contains vegetation characteristic of a sand dune-mesquite vegetation zone. Vegetation density for this bivouac site is also approximately 45%, consisting largely of sandsage and creosote. No protected species, reptiles, birds, or mammals were observed on either bivouac site during a recent survey (GMI 1995).

3.8 Borrow Pit Areas

Two borrow pit areas (BP #1 and #2) proposed for use in conjunction with this project were surveyed for biological and cultural resources (Figure 2-2). These borrow pits provide different fill materials; BP #1 is a sand borrow pit and BP #2 is a caliche borrow pit. Vegetation surrounding these areas was typical of a sand dune-mesquite vegetation zone. Generally, vegetation cover ranged from 40 to 60 percent. The majority of the area within the borrow pits was void of vegetation; much of the sand had been removed from BP #1 and the caliche layer was visible in BP #2. A previously unrecorded archaeological site (FB 9374) was discovered partially exposed, about two meters from the top of a cutbank in BP #1. Additional disturbance to, or use of, this borrow pit area would require full project monitoring. No other archaeological sites were located within either borrow pit area. Additionally, no protected species, reptiles, birds, or mammals were observed on either borrow pit area during a recent survey (GMI 1995).

3.9 Cultural Resources

An intensive cultural resource inventory was conducted using pedestrian transects spaced 15 meters apart throughout Range 8, the borrow pit areas, and roads to the borrow pit areas. Isolated artifacts were thoroughly documented upon discovery. Cultural resource files at Ft. Bliss Directorate of Environment, Cultural Resource Branch, were reviewed to determine the presence/extent of previous investigations at Meyer Range (Carmichael 1986). Several records of previously found artifacts were included in Ft. Bliss files. The majority of the sites associated with these artifacts are currently disturbed. Surveys conducted during preparation of this EA revealed one previously unrecorded prehistoric site and nine isolated artifact occurrences. The prehistoric site (FB 9374) consisted of two fire-cracked rocks, various assorted lithic debitage, groundstone, and a single brownware sherd. Due to its limited exposure in a near-vertical embankment, the true extent of previous disturbance and site limits remains unknown. This site is potentially eligible for the National Register of Historic Places, under Criterion D, information potential (U.S. Department of Interior 1990). Additional artifacts were located along the entrance road to BP #2. The significance of isolated artifacts found within Range 8 and along the entrance road to BP #2 is unknown although they provide evidence that other artifacts may be present in Meyer Range Complex.

3.10 Noise and Safety

There are three common classifications of noise: 1) general audible noise (in the range heard by humans); 2) special noise, including impulse noises, sonic booms, and artillery blasts that can have a sound pressure

or shock component; and 3) noise-induced vibration, also typically caused by sonic booms or artillery blasts involving noise levels that can cause physical movement (i.e., vibration) and even possible damage to natural and man-made structures such as geologic faults, buildings, and cultural resource artifacts.

These three types of noise are typically measured in different ways:

1) Audible noise typically is measured in A-weighted sound levels expressed in decibels (dBA). The A-scale de-emphasizes the low- and high-frequency portions of the sound spectrum and provides a good approximation of the response of the average human ear. On the A-scale, 0 dBA represents the average least perceptible sound and 140 dBA represents the intensity at which the eardrum may rupture;
2) Special noise is measured wherein C-weighted levels expressed in decibels (dBC) account for sound impulses and sound pressure levels, such as that caused by sonic booms, artillery fire, and exploding ordnance; and
3) Noise-induced vibration is measured in peak acceleration or root-mean-square acceleration of the structure which vibrates and possibly is damaged by the vibrations.

Sources associated with routine activities that contribute to the general ambient noise levels outside the Ft. Bliss installation boundary include aircraft operation, missile and artillery firing, and ground vehicle operations. Missile firing noise is attenuated such that anyone more than three miles away will not experience any significant adverse impacts. Missile launch and impact noise-monitoring data indicate that only personnel in the immediate launch or impact areas have potential to be exposed to hazardous noise levels (U.S. Army 1985). Weapons firing at McGregor Range, which, along with Dona Ana/Orogrande Range, comprises the majority of firing at Ft. Bliss, is approximately 20 miles north of residential areas near the main cantonment area.

3.11 Hazardous Materials and Wastes

During the survey of the proposed training facility, notes were made of any potential liabilities on or near the site. Some litter, target debris and shell casings, was present on Range 8; however, this waste was generally small and comprised only a very limited amount (less than one percent) of the surface area.

3.12 Socioeconomic Resources

The Region of Influence (ROI) for the proposed construction of a weapons training facility on Range 8, Meyer Range Complex, McGregor Range, Ft. Bliss includes Otero County, New Mexico and El Paso County, Texas. The socioeconomic characteristics to be addressed include current population estimates, income and employment figures, and the number of housing units.

Population

The 1995 population estimate for the ROI is 710,711 of which 93 percent is comprised of El Paso County residents (U.S. Dept. of Commerce 1994a). Annual population growth in this area has exhibited an increase of approximately 2.4 percent per year since 1980. The growth in each county has surpassed the growth rate in their respective states of Texas and New Mexico for the same time period.

Employment and Income

Total employment in the ROI is 233,688 with the leading employment sectors being government, services, and retail trade (U.S. Dept. of Commerce 1994b). As of September 1994, the average unemployment rate for the year was eight percent in Otero County and 10.9 percent in El Paso County (U.S. Dept. of Labor 1994).

As of 1992, total earnings in the ROI were the largest in the government, services, and retail trade sectors (U.S. Dept. of Commerce 1994c). Per capita personal income averaged $9,600 in 1990 which is significantly below the national average. About 26 percent of the persons in El Paso County and 16 percent of those in Otero County were below the poverty level (U.S. Dept. of Commerce 1994a). While the percentage for El Paso County is above the Texas percentage, the 16 percent figure for Otero County is below the state's poverty figure for New Mexico.

Housing

The total number of housing units estimated to be in the ROI in 1995 is 237,343, with approximately 89 percent of the units located in El Paso County. The housing market in El Paso County can be described as a tight market with a low vacancy rate of 4.9 percent, as of 1990. However, the housing situation in Otero County is very different with a vacancy rate of 21.7 percent, as of 1990 (U.S. Dept. of Commerce 1994a).

4.0 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

Only resources with the potential for negative impacts either by, or as a result of construction of, the training facility are discussed below.

4.1 Air Quality

Use of heavy construction equipment during construction will produce approximately 70 tons of air pollutants (U.S. Environmental Protection Agency 1985). However, the addition of pollutants from construction activities is only temporary, and thus, will only minimally impact the area. Therefore, construction can occur without detrimental effects on the air quality of the project area.

4.2 Natural Resources

Vegetation

Due to the current condition of the range (over 85% unvegetated), construction activities that occur within existing range berms will not have a detrimental effect on vegetation communities. However, activities associated with expanding the range will require removal of some vegetation. Intensity of use and degree of disturbance are the most important considerations in determining the extent of impact to vegetation outside of berms; temporary disturbance would have a lesser effect than permanent removal. Limiting machinery and troop movements to within berms or to specific small areas outside of berms will reduce severity of potential impacts.

Threatened, Endangered, and Protected Species

Lists of protected species occurring in the area of proposed construction were requested from state and federal agencies. Attention was paid as to possible occurrence of any of these species. During a recent natural resource survey of the project area, no threatened or endangered species were located. Habitat for protected species does not exist within Range 8 or is heavily deteriorated due to the high degree of previous disturbance throughout the area. Therefore, facility construction will not impact any protected species.

4.3 Borrow Pit Areas

Presence of a significant archaeological site (FB 9374) within BP #1 precludes use of much of that area. Further utilization of that pit for borrow material may further disturb that site or other undiscovered artifacts or sites within that area. Expansion of either borrow pit into the surrounding area would impact the vegetation in the immediate area. Monitoring of both borrow pits would facilitate use of these areas for fill material; however, only a small portion of BP #1 would be available for use and this borrow pit would require full monitoring. With monitoring, no adverse impacts should occur.

4.4 Cultural Resources

The majority of the Range 8 lacked archaeologically significant remnants and was, therefore, free of any archaeological constraints to the proposed training facility construction. Due to previously recorded cultural properties in the Meyer Range area as well as observations made during a recent survey, a high probability remains that buried cultural resources may be present in undisturbed areas of the range. Impacts to undiscovered artifacts or archaeological sites are unknown. A significant site (FB 9374) was located within BP #1; however, monitoring of areas during construction activities should facilitate avoidance of impacts to any newly discovered or existing artifacts or sites. Flagging of additional areas located along the entrance road to BP #2 should also minimize impacts to cultural resources in that area.

4.5 Solid Waste

Due to the nature of the activities that will occur at the training facility, additional waste, in the form of expended lead and brass casings, may be found on the area. Also, additional used targets could potentially be found on the area. However, with proper maintenance, impacts associated with solid waste will only be minor.

4.6 Socioeconomic Resources

Impacts to socioeconomic characteristics in the region of influence (ROI) will be discussed in the following sections. Specific characteristics to be addressed are population, employment, income and housing. Proposed construction of the weapons training facility would be completed in approximately six weeks with military personnel providing the labor. Equipment and materials would be government-owned. Overall

socioeconomic impacts to the ROI resulting from the construction of the training facility would be positive but insignificant.

Population

The proposed construction would be performed by the HCS 864th Engineer Combat B (Heavy) from Fort Lewis, Washington. Because the construction workers are military personnel who would be in the area for approximately six weeks, the proposed activity would not have impacts on local population. The construction would not induce permanent in- or out-migration to the area.

Employment and Income

Proposed construction would not have impacts on local employment or income. Equipment and materials used would be government-owned and would not be purchased in the local community. Although workers may spend a portion of their incomes in the local community, the duration of the project would not be long enough for their spending to have significant impacts on the local community.

Housing

Because the proposed construction would not induce a permanent in-migration of people nor would there be additional permanent employees, there would be no increase in demand for housing in the ROI. The construction crew would be housed at a bivouac site on Meyer Range for the duration of training facility construction.

4.7 Summary of Impacts

No significant adverse environmental impacts were found to be associated with proposed weapons training facility construction. Protected species were not found on the project area, and will not cause a conflict with proposed use of the project area. Also, no environmentally unique or sensitive areas were found on the proposed construction site (GMI 1995). Despite the temporary addition of air pollutants to the area from construction activities, overall effects to air quality will be minimal. Impacts to cultural resources can be avoided by monitoring all project activities.

Since this area was previously used as a firing range, and thus previously disturbed, any impacts associated with proposed activities of the new training range should not have detrimental effects on the resources of the immediate area of the range. Cumulative impacts associated with construction of this facility along with other JTF-6 projects were considered in a Programmatic Environmental Impact Statement (U.S.

Department of Justice, INS, and JTF-6 1994). This project will not have any additional cumulative impacts beyond those already considered.

5.0 MITIGATION

This section describes measures that may be implemented to eliminate potential significant adverse impacts of the proposed weapons training facility construction. These measures and guidelines may be incorporated as part of the proposed action. Existing roads will be utilized when available, rather than building new roads and further impacting the project area. Activities that may impact the area outside of the section of proposed expansion should be avoided. Further, the potential exists that additional buried artifacts or archaeological sites may be located within the proposed expansion area. Therefore, an archaeologist should conduct cultural resource monitoring during the entire construction process. BP #1 will not be used during construction to avoid impacts to cultural resources located within that borrow pit. Any activities that will result in changes to the existing entrance road to BP #2 will be reported to environmental personnel 24 hours prior to initiation of that activity to allow consideration of impacts.

Refueling of machinery will be completed following accepted guidelines and all vehicles will have drip pans during storage to contain minor spills and drips. Although unlikely, a hazardous materials spill (i.e., fuel spill) could occur during proposed construction. Any major fuel spill (i.e., > five gallons) will be contained by utilizing earthen berms. In addition, any major spill will be reported immediately to JTF-6 environmental personnel who will notify appropriate Federal and state agencies. Disposal of the material will be in accordance with Federal and state regulations.

6.0 REFERENCES

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7.0 ACRONYMS AND ABBREVIATIONS

AQCR	Air Quality Control Regions
BORTAC	Border Patrol Tactical Unit
CAAQ	Clean Air Act Amendments
CFR	Code of Federal Regulations
CQB	Close Quarter Battle
dBA	A-Weighted Decibels
dBC	C-Weighted Decibels
DoD	Department of Defense
EA	Environmental Assessment
ERT	Emergency Response Team
GMI	Geo-Marine, Inc.
HIDTA	High Intensity Drug Trafficking Areas
INS	Immigration and Naturalization Service
IPSC	International Practical Shooting Competition
JTF-6	Joint Task Force Six
LEA	Law Enforcement Agency
NAAQS	National Ambient Air Quality Standards
NDCS	National Drug Control Strategy
NEPA	National Environmental Policy Act of 1969
PSD	Prevention of Significant Deterioration
USCOE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
WQCC	Water Quality Control Commission
WSMR	White Sands Missile Range

APPENDIX A

CORRESPONDENCE

December 20, 1994

Planning Division

SUBJECT: Environmental Assessments (EA) for Two Projects Proposed by the Joint Task Force Six (JTF-6)

Ms. Karen Lightfoot
State of New Mexico
Energy, Minerals and Natural Resources Department
Forestry and Resources Conservation Division
P.O. Box 1948
Santa Fe, New Mexico 87505

Dear Ms. Lightfoot:

The Fort Worth District Corps of Engineers will be preparing Environmental Assessments (E) for two separate projects proposed by the Joint Task Force Six (JTF-6). As you know, JTF-6 is a Department of Defense agency formed in 1989 to assist law enforcement agencies throughout the southwestern border states in their efforts to detect and deter illegal drug trafficking. JTF-6 has been requested by the U.S. Border Patrol to provide engineering support on the two projects.

The first project involves construction of a border fence along the US/Mexico border near Sunland Park, Dona Ana County, New Mexico. The fence will be about one mile long and 10 feet high and will be constructed from steel airfield landing mats.

The second project involves construction of a weapons training range within Fort Bliss' McGregor Range complex. The range will encompass about 15 acres and will be adjacent to other ranges routinely used by the military and law enforcement agencies. This new range will provide training opportunities for the Border Patrol's BORTEX Division.

As mentioned above, both of these projects will be addressed in separate, but tiered, EAs, as specified in the JTF-6 Programmatic Environmental Impact Statement. Your office will be given the opportunity to review and comment on each E, which will contain more detailed information concerning the project design, operation, and construction schedule.

One of the tasks during the preparation of these EAs is to conduct field surveys for protected species. The purpose of this letter, therefore, is to request information you may have about the potential or known presence of any such species within or near any of the proposed project sites. While the results of these surveys will be discussed in the EA, locations of protected species, if found, will not be included in the EA.

If you have any questions, or require additional information, please do not hesitate to call Mr. Eric Verwers of my staff at (817) 334-3246. Thank you for your prompt attention and continued cooperation.

Sincerely,

Paul M. Hathorn
Chief, Environmental
Resources Branch

Verwers/ds/4-3246
PAXTON, CESWF-PL-RE
HATHORN, CESWF-PL-R

December 20, 1994

Planning Division

SUBJECT: Environmental Assessments (EA) for Two Projects Proposed by the Joint Task Force Six (JTF-6)

Ms. Jennifer Fowler-Propst, Field Supervisor
U.S. Fish and Wildlife Service
Ecological Services
Suite D, 3530 Pan American Highway, NE
Albuquerque, New Mexico 87107

Dear Ms. Fowler-Propst:

The Fort Worth District Corps of Engineers will be preparing Environmental Assessments (E) for two separate projects proposed by the Joint Task Force Six (JTF-6). As you know, JTF-6 is a Department of Defense agency formed in 1989 to assist law enforcement agencies throughout the southwestern border states in their efforts to detect and deter illegal drug trafficking. JTF-6 has been requested by the U.S. Border Patrol to provide engineering support on the two projects.

The first project involves construction of a border fence along the US/Mexico border near Sunland Park, Dona Ana County, New Mexico. The fence will be about one mile long and 10 feet high and will be constructed from steel airfield landing mats.

The second project involves construction of a weapons training range within Fort Bliss' McGregor Range complex. The range will encompass about 15 acres and will be adjacent to other ranges routinely used by the military and law enforcement agencies. This new range will provide training opportunities for the Border Patrol's BORTEX Division.

As mentioned above, both of these projects will be addressed in separate, but tiered, EAs, as specified in the JTF-6 Programmatic Environmental Impact Statement. Your office will be given the opportunity to review and comment on each E, which will contain more detailed information concerning the project design, operation, and construction schedule.

One of the tasks during the preparation of these EAs is to conduct field surveys for protected species. The purpose of this letter, therefore, is to request information you may have about the potential or known presence of any such species within or near any of the proposed project sites. While the results of these surveys will be discussed in the EA, locations of protected species, if found, will not be included in the EA.

If you have any questions, or require additional information, please do not hesitate to call Mr. Eric Verwers of my staff at (817) 334-3246. Thank you for your prompt attention and continued cooperation.

Sincerely,

Paul M. Hathorn
Chief, Environmental
Resources Branch

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Verwers/ds/4-3246
PAXTON, CESWF-PL-RE
HATHORN, CESWF-PL-R

State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87505

DRUG FREE
It's a State of Mind!

6 January, 1995

Paul M. Hathorn
Department of the Army
Fort Worth District, Corps of Engineers
P. O. Box 17300
Fort Worth, Texas 76102-0300

Dear Mr. Hathorn,

Several State Endangered plants that occur in Dona Ana County have potential to be in areas of two projects proposed by the Joint Task Force Six (JTF-6). The two proposed projects are a fence along the US/Mexico border near Sunland Park and a weapons training range within Fort Bliss' McGregor Range complex. They include Coryphantha scheeri (Scheer's pincushion cactus), Mammillaria wrightii (Wright's fishhook cactus), Opuntia arenaria (sand prickly pear cactus), Neolloydia intertexta (white visnagita cactus) and Cereus greggii, (night-blooming cereus).

We recommend that you conduct an endangered species biological clearance survey before proceeding with any construction or other major disturbance. If during your survey, you encounter any of these plants, we would appreciate knowing their exact locations.

If you have any questions, please do not hesitate to call Karen Lightfoot, Endangered Species Botanist for the State of New Mexico.

Sincerely,

Gregory Fitch
Acting State Forester

By:
Karen S. Lightfoot

VILLAGRA BUILDING - 408 Galisteo
Forestry and Resources Conservation Division
P.O. Box 1948 87504-1948
827-5830
Park and Recreation Division
P.O. Box 1147 87504-1147
827-7465

2040 South Pacheco
Office of the Secretary
827-5950
Administrative Services
827-5925
Energy Conservation & Management
827-5900
Mining and Minerals
827-5970
Oil Conservation
827-7131

PL-RE

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

NEW MEXICO ECOLOGICAL SERVICES STATE OFFICE
2105 OSUNA NE
ALBUQUERQUE, NEW MEXICO 87113
Telephone: (505) 761-4525 Fax Number: (505) 761-4542

February 1, 1995

Cons. #2-22-95-I-126
2-22-95-I-131

Mr. Paul M. Hathorn
U.S. Army Corps of Engineers
Chief, Environmental Resources Branch
P.O. Box 17300
Fort Worth, Texas 76102-0300

Dear Mr. Hathorn:

This responds to your letter dated December 20, 1994, requesting two lists of species federally listed or proposed to be listed as threatened or endangered to be used in the preparation of two Environmental Assessments. The proposed actions involve the construction of 1.5 miles of fence near El Paso, El Paso County, Texas, and Sunland Park, Doña Ana County, New Mexico (#2-22-95-I-126), and the construction of a weapons training facility for the BORTEX Division of the U.S. Border Patrol (#2-22-95-I-131). The weapons training facility would be located within the Fort Bliss MacGregor Range complex and disturb approximately 15 acres.

We have used the information in your request to narrow the lists of species occurring in the project area to those that may be affected by the proposed actions.

Border Fence at Sunland Park

The endangered bald eagle, interior least tern, whooping crane, northern aplomado falcon, and Sneed's pincushion cactus may be found in the project area (see enclosure). In addition, the southwestern willow flycatcher may occur there.

The list has been expanded to include the following category 2 candidate species that may be found in the project area (see enclosure): Arizona black-tailed prairie dog, greater western mastiff bat, occult little brown bat, spotted bat, White Sands woodrat, Baird's sparrow, ferruginous hawk, loggerhead shrike, western snowy plover, white-faced ibis, Texas horned lizard, Anthony blister beetle, Doña Ana talussnail, Alamo beardtongue, grama grass cactus, Mescalero milkwort, night-blooming cereus, nodding cliff daisy, sand prickly pear, sandhill goosefoot, and Standley's whitlowgrass.

Wetlands, riparian vegetation, and other sensitive wildlife habitat on or near the site should also be protected. The Rio Grande is located at or near the proposed project site; thus, adjacent riverine or wetland habitats may be directly affected, or indirectly affected by downslope or downwind impacts. If impacts cannot be avoided, we would appreciate discussing your project in more detail.

Weapon's Training Facility

The endangered bald eagle, northern aplomado falcon, and Sneed's pincushion cactus may be found in the project area (see enclosure). In addition, the southwestern willow flycatcher may occur there.

The list has been expanded to included the following category 2 candidate species that may be found in the project area (see enclosure): Arizona black-tailed prairie dog, greater western mastiff bat, occult little brown bat, spotted bat, White Sands woodrat, Baird's sparrow, ferruginous hawk, loggerhead shrike, Texas horned lizard, Alamo beardtongue, grama grass cactus, Mescalero milkwort, night-blooming cereus, nodding cliff daisy, sand prickly pear, sandhill goosefoot, and Standley's whitlowgrass.

Wetlands, riparian vegetation, and other sensitive wildlife habitat on or near the site should also be protected. The EA should review potential for off-site impacts, including those occurring downslope or downwind of the proposed project. If impacts cannot be avoided, we would appreciate discussing your project in more detail.

On July 23, 1993, the U.S. Fish and Wildlife Service (Service) published a proposed rule in the Federal Register (Vol. 58, No. 140) to list the southwestern willow flycatcher (Empidonax traillii extimus) as endangered with critical habitat. Any information you may have on the biology of this species, including status, distribution, and threats, or the potential economic effects of the proposed critical habitat designation, would be appreciated.

Category 2 candidates are those species for which the Service has information indicating that proposing to list is possibly appropriate, but for which substantial data on biological vulnerability or threats are not currently available to support the immediate preparation of proposed rules. Candidate species have no legal protection under the Endangered Species Act and are included in this document for planning purposes only. However, the Service would appreciate receiving any status information available on these species.

Previous correspondence from the contractor charged with writing the EA indicates that New Mexico Energy, Minerals and Natural Resources Department, Forestry and Resources Conservation Division will be contacted for a list of species of concern. In addition, we suggest you contact the New Mexico Department of Game and Fish and the for information concerning fish and wildlife of State concern.

Conversations with your office indicate data for JTF-6 projects is being entered into a Geographic Information System (GIS). These two projects should be included in the GIS databank for use in cumulative impact analysis. Results of such analyses should be included in the EAs being prepared for these two projects. In addition, ongoing analyses of cumulative impacts for all JTF-6 activities across the southern border states should be examined to determine whether significant impacts exist, and appropriate mitigation for those impacts proposed for review, if necessary.

If we can be of further assistance, please call Ms. Karen Cathey at (505) 761-4525.

Sincerely,

Jennifer Fowler-Propst
State Supervisor

Enclosure

cc: (wo/enc.)
Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico
Director, New Mexico Energy, Minerals and Natural Resources Department, Forestry and Resources Conservation Division, Santa Fe, New Mexico
Regional Director, U.S. Fish and Wildlife Service, Ecological Services, Albuquerque, New Mexico

Species List
Construction of Weapons Training Facility for the Bortex Division
Border Patrol and Border Fence
El Paso County, Texas and Doña Ana County, New Mexico
February 1, 1995

Endangered

Bald eagle (Haliaeetus leucocephalus) - The bald eagle occurs in New Mexico mainly as a winter resident and migrant, with several nesting in the state. It is found in riparian areas adjacent to rivers, reservoirs, and ponds, and roosts in large trees which may be close to foraging areas. Rabbits, fish and waterfowl are the primary prey items.

Authority: Sandy Williams, New Mexico Department of Game and Fish, P.O. Box 25112, Santa Fe, New Mexico 87504, (505) 827-9914.

Interior least tern (Sterna antillarum athalassos) - This species nests on sandy beaches on shorelines of streams, rivers and lakes and is found on Bitter Lake National Wildlife Refuge.

Authority: John P. Hubbard, New Mexico Department of Game and Fish, P.O. Box 25112, Santa Fe, New Mexico 87504, (505) 827-9925.

Whooping crane (Grus americana) - Occupies the project area October through February. Roosts on gravel bars and islands in the Rio Grande. Feeds in cultivated fields and wetlands within several miles of the Rio Grande.

Authorities: James Lewis, U. S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103, (505) 766-3972, and Roderick Drewien, c/o Bosque del Apache National Wildlife Refuge, P.O. Box 1246, Socorro, New Mexico 87801, (505) 835-1828.

Northern aplomado falcon (Falco femoralis septentrionalis) - This species is very rare in New Mexico. The historic range of this bird includes Catron, Chaves, Dona Ana, Eddy, Grant, Hidalgo, Lea, Lincoln, Luna, Otero, Sierra, and Socorro Counties. This species is found in open woodland, savanna, or grassland habitats.

Authority: Sandy Williams, New Mexico Department of Game and Fish, P.O. Box 25112, Santa Fe, New Mexico 87504, (505) 827-9914.

Sneed's pincushion cactus (Coryphantha sneedii var. sneedii) - This species usually prefers limestone ledges in the desert and grassland at 4,300 to 5,400 feet elevation.

Authority: Robert Sivinski, New Mexico Energy, Minerals and Natural Resources Department, Forestry and Resources Conservation Division, P.O. Box 1948, Santa Fe, New Mexico 87104-1948, (505) 827-7865.

Proposed Endangered with Critical Habitat

Southwestern willow flycatcher (Empidonax traillii extimus) - The southwestern willow flycatcher breeds in riparian habitats along rivers, streams, or other wetlands, where dense growths of willows, arrowweed, tamarisk, or other species are present, often with a scattered overstory of cottonwood. It is a sparrow sized, olive green flycatcher with a dark head, whitish throat, olive breast, and yellow belly. It has no eye ring and its wings have two white bars.

Authority: Sandy Williams, New Mexico Department of Game and Fish, P.O. Box 25112, Santa Fe, New Mexico 87504, (505) 827-9914.

Catagory 2 Candidates

Arizona black-tailed prairie dog (Cynomys ludovicianus arizonensis) - This species is found on flat, dry, open grasslands of mesa tops or valley bottoms within broad limits of the Upper Sonoran Zone. Dona Ana County is within the historic range of this mammal.

Authority: John Hubbard, New Mexico Department of Game and Fish, P.O. Box 25112, Santa Fe, New Mexico 87504, (505) 827-9925.

Greater western mastiff bat (Eumops perotis californicus) - This species is a resident of Madrean evergreen woodland and Chihuahuan grassland and scrubland. It roosts in small colonies in rugged canyons and cliffs. Occurs in the southwestern part of the state.

Authority: Scott Altenbach, University of New Mexico, Department of Biology, Albuquerque, New Mexico 87131, (505) 277-3411.

Occult little brown bat (Myotis lucifugus occultus) - This species is a montane dweller and roosts in natural caves, mine tunnels, hollow trees, or buildings.

Authority: Scott Altenbach, University of New Mexico, Department of Biology, Albuquerque, New Mexico 87131, (505) 277-3411.

Spotted bat (Euderma maculatum) - This bat is found in several national forests in New Mexico. This species tends to occur in remote areas, selecting specialized roosting sites. The presence of streams and nearby cliffs or steep hillsides with loose rocks may be habitat for this bat.

Authority: Scott Altenbach, University of New Mexico, Department of Biology, Albuquerque, New Mexico 87131, (505) 277-3411.

White Sands woodrat (Neotoma micropus leucophaea) - This species is endemic to White Sands. A specimen was collected in Otero County, 10 miles West of Point of Sands, White Sands National Monument.

Authority: None.

Baird's sparrow (Ammodramus bairdii) - Baird's sparrow occupies areas of open prairie grassland with patches of shrubbery such as wolfberry, wild rose, and willow. The species also occupies moist meadows and tall grass prairies associated with dense grass or other dense herbaceous vegetation.

Authority: None.

Ferruginous hawk (Buteo regalis) - Found almost statewide during migration. This bird seems to key in on wide open grasslands and prairies, especially for nesting.

Authority: Sandy Williams, New Mexico Department of Game and Fish, P.O. Box 25112, Santa Fe, New Mexico 87504, (505) 827-9914.

Loggerhead shrike (Lanius ludovicianus) - This species inhabits grass/shrubland, open woodland, and chaparral. The bird is rare to fairly common at lower and locally at middle elevations; casual at higher elevations. Resident statewide.

Authority: Steve Lewis, U.S. Fish and Wildlife Service, Bishop Henry Whipple Federal Building, One Federal Drive, Fort Snelling, Minnesota, 55111-4056, (612) 725-313.

Western snowy plover (Charadrius alexandrinus nivosus) - Inhabits flat sandy areas, alkali flats, and areas near water which are devoid of vegetation or have very little vegetation.

Authority: Sandy Williams, New Mexico Department of Game and Fish, P.O. Box 25112, Santa Fe, New Mexico 87504, (505) 827-9914.

White-faced ibis (Plegadis chihi) - This species inhabits salt and freshwater marshes, shallow margins of muddy pools, ponds, and rivers.

Authority: Sandy Williams, New Mexico Department of Game and Fish, P.O. Box 25112, Santa Fe, New Mexico 87504, (505) 827-9914.

Texas horned lizard (Phrynosoma cornutum) - Dark stripes radiate from the eye region on each side of its face. Two rows of pointed fringe scales on each side of the body. The lizard inhabits arid and semiarid open country with sparse plant growth--bunch grass, cactus, juniper, acacia, and mesquite. The substrate may be of sand, loam, hardpan, or rock. Some loose soil is usually present in which these lizards bury themselves. They also seek shelter under shrubs, in burrows of other animals, or among rocks.

Authority: Charlie Painter, New Mexico Department of Game and Fish, P.O. Box 25112, Santa Fe, New Mexico 87504, (505) 827-9901.

Anthony blister beetle (Lytta mirifica) - This species of beetle is closely tied to ground nesting solitary bees. The dependance of this species on the bees seems to be its limiting factor. This beetle occurs variably in southern Dona Ana County, particularly in the Anthony area.

Authority: George Divine, U.S. Fish and Wildlife Service, Fish and Wildlife Enhancement, Endangered Species, P.O. Box 1306, Albuquerque, New Mexico 87103, (505) 766-3972.

Dona Ana talussnail, (Sonorella todseni) - This species occurs under loose stones at the base of cliffs and talus slopes; in Chihuahuan scrub/grassland dominated by grama grasses, live oaks, and xeric-adapted shrubs. A local endemic, restricted to the Dona Ana Mountains, a small, low, arid range of igneous rock, north of Las Cruces, Dona Ana County. Known only from the type locality on the north slope of Dona Ana Peak.

Authority: Gerald Burton, U.S. Fish and Wildlife Service, New Mexico State Ecological Services Field Office, 2105 Osuna NE, Albuquerque, New Mexico 87113, (505) 761-4525.

Alamo beardtongue (Penstemon alamosensis) - Alamo beardtongue is a green or grayish green perennial herb with glabrous stems and leaves; basal leaves are elliptic or broadly lance shaped; and the stem leaves much smaller and in 2-4 pairs, usually lance shaped. The stems are 12-40 inches tall, the bright red flowers in a long, narrow inflorescence, often secund or turned to one side, the corollas about 1 inch long and funnel shaped. The staminode or sterile stamen is without hairs on the tip. The plants flower in May and June. The plants grow in canyon bottoms, crevices, and pockets in rocky limestone.

Authority: Robert Sivinski, New Mexico Energy, Minerals and Natural Resources Department, Forestry and Resources Conservation Division, P.O. Box 1948, Santa Fe, New Mexico, 87504-1948, (505) 827-7865.

Grama grass cactus (Pediocactus papyracanthus) - Located primarily in northern, central, and southern New Mexico and central Arizona. At one time, this species may have had a considerably larger range and been more abundant. Increased grazing has decreased the numbers of cactus and perhaps reduced its range. Plants occur in open flats in grasslands and pinyon-juniper woodlands at 5,000-7,300 feet elevation. The plants commonly grow in sandy-gravelly and occasionally in gypseous soils.

Authority: Robert Sivinski, New Mexico Energy, Minerals and Natural Resources Department, Forestry and Resources Conservation Division, P.O. Box 1948, Santa Fe, New Mexico 87504-1948, (505) 827-7865.

Mescalero milkwort (Polygala rimulicola var. mescalerorum) - This matted perennial produces rose-purple and white flowers from June to September. It has been found in limestone cliffs at 5,000 feet elevation.

Authority: Robert Sivinski, New Mexico Energy, Minerals and Natural Resources Department, Forestry and Resources Conservation Division, P.O. Box 1948, Santa Fe, New Mexico 87504-1948, (505) 827-7865.

Night-blooming cereus (Cereus greggii var. greggii) - The night-blooming cereus is a cactus with slender, strongly angled stems with four to six prominent ribs, erect to reclining, up to 6 feet long and 0.5 inch in diameter. The flowers are white, opening at night, and are about 8 inches long. The plants grow in washes or flats, at about 3,000 to 5,000 feet, often under bushes or shrubs. The flowers appear in June. The plants are popular among cactus collectors and local populations are often completely wiped out by collecting.

Authority: Karen Lightfoot, New Mexico Energy, Minerals and Natural Resources Department, Forestry and Resources Conservation Division, P.O. Box 1948, Santa Fe, New Mexico 87504-1948, (505) 827-7853.

Nodding cliff daisy (Perityle cernuum) - This yellow daisy flowers form June to September. It is found in igneous cliffs at 5,000-9,000 feet elevation.

Authority: Robert Sivinski, New Mexico Energy, Minerals and Natural Resources Department, Forestry and Resources Conservation Division, P.O. Box 1948, Santa Fe, New Mexico 87504-1948, (505) 827-7865.

Sand prickly pear (Opuntia arenaria) - The sand prickly pear occurs on sandy dunes, flood plains, and foothills at about 3,600 feet. The stems are jointed, less than 12 inches high, but forming clumps up to 5 ft. in diameter. The roots have clusters of tiny spines. The joints of the pads are broadest above the middle, taper to the base, and are up to 3 inches long and 1 inch wide. There are five to seven spines per cluster, white or grey to tinged with red, up to 1.2 inches long. The flowers are yellow, 1.5-2.5 inches wide. The fruit is green with whitish spines. The plants flower in May or June.

Authority: Karen Lightfoot, New Mexico Energy, Minerals and Natural Resources Department, Forestry and Resources Conservation Division, P.O. Box 1948, Santa Fe, New Mexico 87504-1948, (505) 827-7853.

Sandhill goosefoot (Chenopodium cycloides) - an annual species up to 1.5 feet tall with smooth to farinose stems having reddish coloration. Leaves are linear and entire, 15 mm long and 1.5 mm broad, thick, bright-green, and smooth on the upper surface, and sparsely farinose beneath. Flowers occur in a large, compound capitate cyme in a panicle or interrupted spike. The pericarp is free or adherent to the seed, bright red and tuberculate. Seed is horizontal, smooth, and lustrous. This taxon is often confused with a close relative, Chenopodium leptophyllum. Occurs in sand dune habitat from 3,600 to 6,500 feet elevation. Known from southwestern Kansas, southeastern Colorado (Animas and Pueblo counties), west Texas (10 counties), and New Mexico (Roosevelt, Doña Ana, Sierra, and Socorro counties).

Authority: Ron McGregor, University of Kansas, Birdwell Botanical Research Laboratory, 2045 Constant Avenue, Campus West, Lawrence, Kansas 66047, (913) 864-4493.

Standley whitlow-wort (Draba standleyi) - This species produces a yellow flower in June-July. It is found in crevices of rocky slopes at 5,000-8,000 feet elevation.

Authority: Robert Sivinski, New Mexico Energy, Minerals and Natural Resources Department, Forestry and Resources Conservation Division, P.O. Box 1948, Santa Fe, New Mexico 87504-1948, (505) 827-7865.

APPENDIX B

SPECIES LISTS

Appendix B-1

Federally Listed Species Potentially Occurring at the Proposed Project Area

Status*	Common Name	Scientific Name
Plants:		
E	Sneed's pincushion cactus	*Coryphantha sneedi var. sneedi*
Birds:		
E	Bald Eagle	*Haliaeetus leucocephalus*
E	Northern Aplomado falcon	*Falco femoralis septentrionalis*

*E = Endangered

Source:

U.S. Army 1994.

Appendix B-2

Candidate Category Two Species Potentially Occurring at the Proposed Project Area

Status*	Common Name	Scientific Name
Plants:		
C2	Grama grass cactus	*Pediocacts papyracanthus*
C2	Alamo beardtongue	*Penstemon alamosensis*
C2	Mescalero milkwort	*Polygala rimulicola var. mescalerorum*
C2	Night blooming cereus	*Cereus greggii var. greggii*
C2	Nodding cliff daisy	*Perityle cernuum*
C2	Sand prickly pear cactus	*Opuntia arenaria*
C2	Sandhill goosefoot	*Chenopodium cycloides*
C2	Standley's whitlowgrass	*Draba stanleyi*
Reptiles:		
C2	Texas horned lizard	*Phrynosoma cornutum*
Birds:		
C2	Ferruginous hawk	*Buteo regalis*
C2	Baird's sparrow	*Ammodramus bairdii*
C2	Loggerhead shrike	*Lanius ludovicianus*
Mammals:		
C2	Spotted bat	*Euderma maculatum*
C2	Arizona black-tailed prairie dog	*Cynomys ludoricianus arizonensis*
C2	Greater western mastiff bat	*Eumops perotis californicus*
C2	Occult little brown bat	*Myotis lucifugus occultus*
C2	White Sands woodrat	*Neotoma micropus leucophaea*

*C2 = Candidate Category Two

Source:

U.S. Army 1993.

Appendix B-3

State Endangered Listed Species and Candidate Species Potentially Occurring at the Proposed Project Area

Status*	Common Name	Scientific Name
	LISTED SPECIES	
Plants:		
E	Night blooming cereus	*Cereus greggi*
E	Orcutt's pincushion cactus	*Coryphantha orcuttii*
E	Organ Mt. pincushion cactus	*Coryphantha organensis*
E	Sheer's pincushion cactus	*Coryphantha cheeri var valida*
E	Button cactus	*Epithelantha micromeris*
E	Sandberg's pincushion cactus	*Escobaria sandbergii*
E	Catchfly gentian	*Eustoma exaltatum*
E	Prairie gentian	*Eustoma grandiflorum*
E	Wright's pincushion cactus	*Mammillaria wrightii*
E	Visnagita cactus	*Neolloydia Intertexta*
E	Visnagita cactus	*Neolloydia intertexta var. dasyacantha*
E	Organ Mt. evening primrose	*Oenothera organensis*
E	Sand prickly pear	*Opuntia arenaria*
E	Alamo penstemon	*Penstemon alamosensis*
E	Nodding cliff daisy	*Perityle cernua*
E	Mescalero milkwort	*Polygala rimulicola var. mescalerorum*
E	Grama grass cactus	*Toumeya papyracantha*
Mollusks:		
E2	Dona Ana talussnail	*Sonorella todseni*
Birds:		
E2	Bald eagle	*Haliaeetus leucocephalus*
E2	Baird's sparrow	*Ammodramus bairdii*
E2	Bell's vireo	*Vireo bellii*
E2	Gray vireo	*Vireo vicinior*
E2	Olivaceous cormorant	*Phalacrocorax olivaceus*
E1	Peregrine falcon	*Falco peregrinus*
E1	Whooping crane	*Grus americana*
E2	Willow flycatcher	*Empidonax traillii extimus*
Mammals:		
E1	Bighorn sheep (desert)	*Ovis canadensis mexicana*
E2	Meadow jumping mouse	*Zapus hudsonius*

Status*	Common Name	Scientific Name
	CANDIDATE SPECIES	
Plants:		
R	Mosquito plant	*Agastache cana*
C	Whorled giant hyssop	*Agastache pringlei var. verticillata*
R	Castetter's milkvetch	*Astragalus castetteri*
C	Wooton's bricklebush	*Brickellia lemmonii var. wootonii*
R	Payson's cryptanth	*Cryptantha paysonii*
R	Standley's whitlowgrass	*Draba standleyi*
R	Five scale bitterweed	*Hymenoxys guinguesquamata*
R	Vassey's bitterweed	*Hymenoxys vasseyi*
C	Wooton's prickly pear	*Opuntia wootonii*
C	Mexican eared fern	*Phanerophlebia auriculata*
R	Supreme sage	*Salvia summa*
R	Smooth figwort	*Scrophularia leavis*
R	Smooth cucumber	*Sicyos glaber*
C	Wright's globemallow	*Sphaeralcea wrightii*
R	Long-stemmed flame flower	*Talinum longipes*

*E = Endangered
E1 = Current survival in jeopardy
E2 = Future survival in jeopardy
R = Rare
C = Candidate with some information for listing

Sources:

Silvinski and Lightfoot 1992.
U.S. Army 1993.